

Enclosed Wetcup Recirculation Kit

312494A

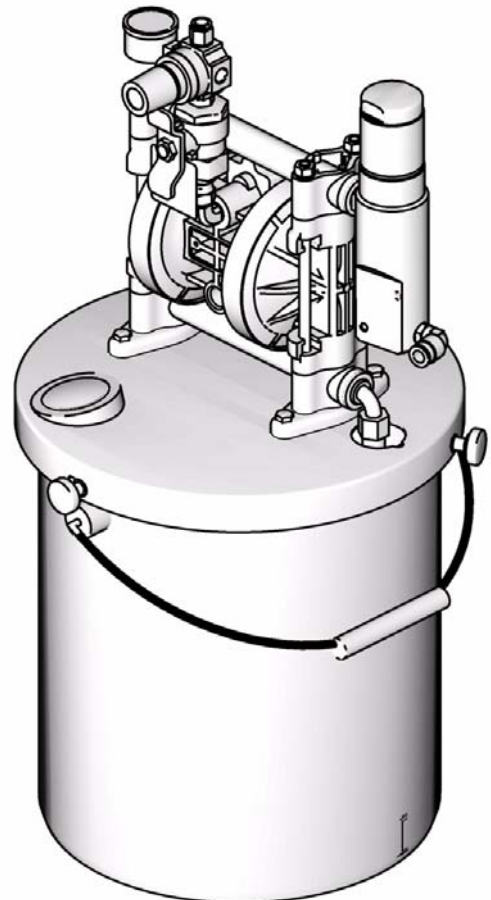
For continuously circulating Throat Seal Liquid through enclosed wetcup on Check-Mate® MaxLife® Displacement Pump. For use with Single Supply and Tandem Supply Systems.

Part 255703



Important Safety Instructions

Read all warnings and instructions in this manual and in your system operation and repair-parts manuals. Save these instructions.



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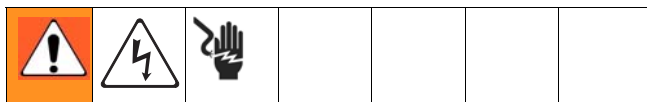
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Features and Benefits

- Throat Seal Liquid (TSL) is circulated through enclosed wetcup to remove contaminants and extend throat seal life.
- A single, large volume source of TSL is used to extend time between scheduled maintenance.
- Only one TSL location to monitor for one or multiple pumps.
- Extended TSL life due to regular filter element cleaning or replacement.
- Easily replace used TSL; no longer need to clean individual wetcups.

Installation

Grounding



The equipment must be grounded. Grounding reduces the risk of static and electric shock by providing an escape wire for the electrical current due to static build up or in the event of a short circuit.

Pump: use ground wire and clamp (included with supply system). Loosen grounding lug locknut and washer. Insert ground wire end into lug slot and tighten locknut securely. Connect ground clamp to a true earth ground.

Solvent pails used when flushing: follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

Installation

The enclosed wetcup recirculation kit does not include a pail. You will need a five-gallon metal pail to attach to the diaphragm pump assembly.

Refer to FIG. 3 for a view of an installed wetcup recirculation kit on a single supply system.

1. Attach diaphragm pump assembly to a five-gallon metal pail.
2. Ground pump and pail. See **Grounding** instructions above.
3. Drill a 3/8 in. diameter hole into center of plastic pail cover plug (P) for fluid return line (H). Install a plug in pail cover.
4. Thread tee fitting (6), bushing (1), and air fitting (7) into inlet of air control on supply system. See FIG. 3 and **Parts**, page 6, for reference.
5. Remove enclosed wetcup cover from displacement pump (L). See manual 312375 for instructions.

6. Remove 1/8 in. npt plug and fill port from wetcup cover.

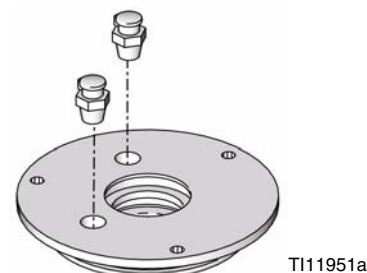


FIG. 1: Remove Plug and Fill Port

7. Install recirculation fitting (20), relief valve outlet (8), and return line fitting as shown in FIG. 2 and FIG. 3.

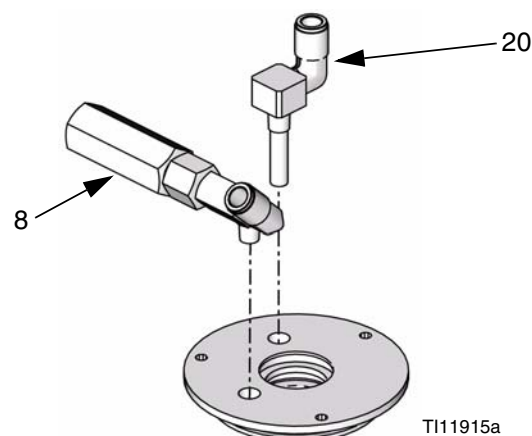


FIG. 2: Install Fitting and Relief Valve Outlet

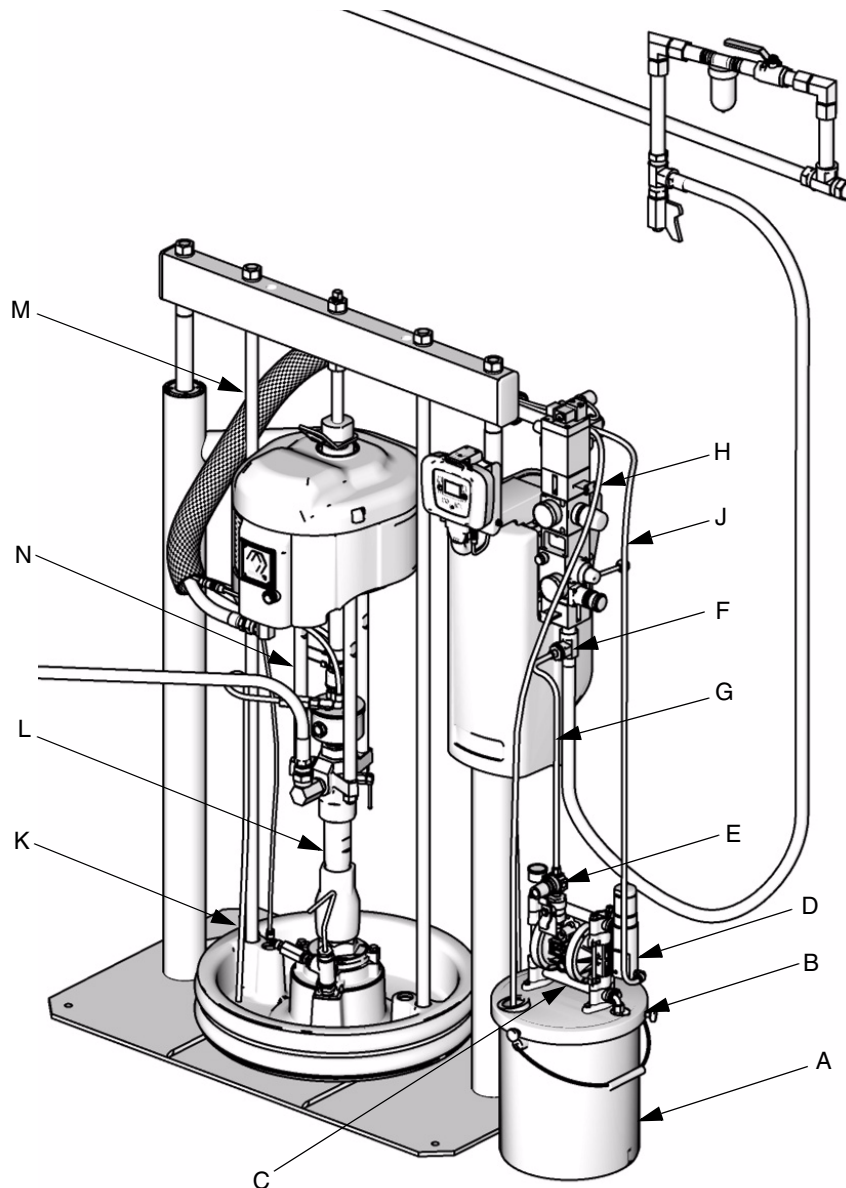
8. Reinstall wetcup on displacement pump (L). See manual 312375 for instructions.

All fluid and air lines plumbed in the following steps consist of 3/8 in. OD tubing included in this kit.

9. Route fluid relief line (K) from relief valve outlet (8) to a suitable and visible location. Use zip ties to fasten fluid relief line to platen lift rod (M) or pump tie rods (N).

Ensure fluid relief line (K) location is visible. Therefore, if fluid is observed, any blockage can be immediately cleared in primary return line and pump throat seal can be replaced.

10. Route fluid supply line (J) from diaphragm pump fluid filter outlet (10) to recirculation fitting (20) on displacement pump (L).
11. Route air supply line (G) from air fitting (7) to air regulator (2) on diaphragm pump (C).
12. Route fluid return line (H) from wetcup return line fitting (4) to five-gallon metal pail (A). Use hole in pail cover plug (P) to secure fluid return line.
13. Verify that routing of fluid and air lines does not interfere with any hardware when ram is raised and lowered.



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FIG. 3: Setup of Wetcup Recirculation Kit with Single Supply System

Key:

- | | | | |
|---|------------------|---|-------------------|
| A | 5 Gallon Pail | H | Fluid Return Line |
| B | Pail Cover | J | Fluid Supply Line |
| C | Diaphragm Pump | K | Fluid Relief Line |
| D | Fluid Filter | L | Displacement Pump |
| E | Air Regulator | M | Platen Lift Rod |
| F | Air Line Adapter | N | Pump Tie Rod |
| G | Air Supply Line | P | Pail Cover Plug |

Operation

First Time Operation

1. Fill five-gallon metal pail with 3 gallons (11.4 liters) of Throat Seal Liquid (TSL) or a solvent that is compatible with this kit and enclosed wetcup. See **Technical Data** on page 7 and manual 312375 for materials of construction.



Do not fill entire pail with TSL or solvent. If TSL is returned to pail due to blockage and/or throat seal leakage, pail will overflow.

2. Prime recirculation system.
 - a. Adjust diaphragm pump air regulator (2) to approximately 20 psi.
 - b. Turn on air shutoff valve (3).
 - c. Watch for leaks and adjust air regulator (2) as needed to load and recirculate TSL.

Daily Operation

Adjust air regulator (2) to obtain desired circulation flow rate. Typical flow rate is 10-20 cycles/min.

Daily Inspection

Perform the following inspections on a daily basis:

- Check cycle/flow rate and adjust diaphragm pump air regulator (2) as needed.
- Inspect TSL or solvent level and condition in metal pail.



If TSL or solvent level is rising, displacement pump throat seals are leaking. Replace throat seals; see manual 312375 for instructions.

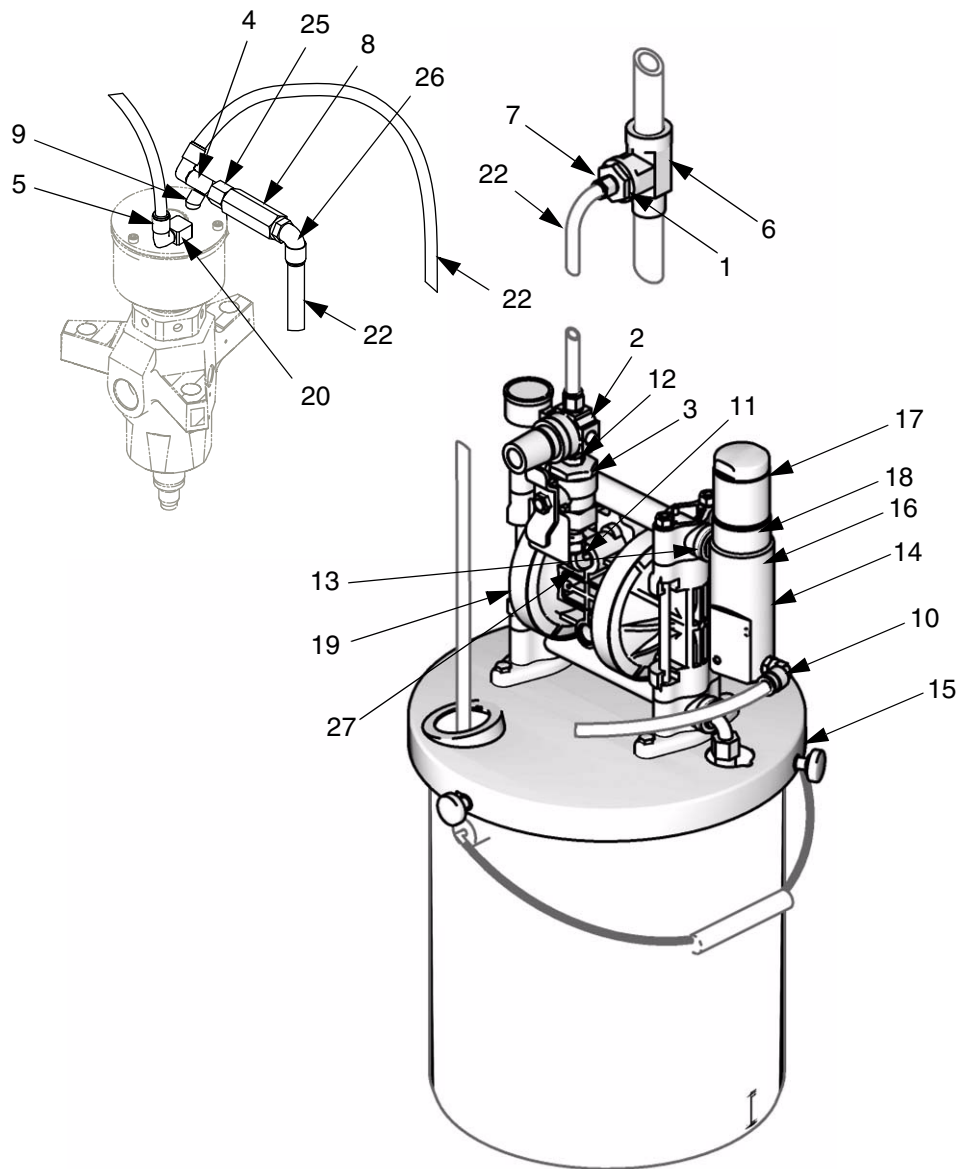
If TSL or solvent is dirty, replace.

- Inspect and clean fluid filter element (16). Clean or replace as needed.



If diaphragm pump is slowing or requires high pressure, inspect fluid filter and clean or replace.

Parts



| Ref. | Part | Description | Qty. | Ref. | Part | Description | Qty. |
|------|--------|---------------------------------|------|------|--------|---|------|
| 1 | 100615 | BUSHING, hex; steel | 1 | 15 | 235654 | KIT, pail mount, 5 gallon | 1 |
| 2 | 110147 | REGULATOR, air; 1/4 npt & gauge | 1 | 16 | 246383 | KIT, filter, 200 mesh | 1 |
| 3 | 110223 | VALVE, vented 2 way | 1 | 17 | 287902 | KIT, filter cap | 1 |
| 4 | 110440 | TEE, branch, male; 1/8 npt | 1 | 18 | 118133 | O-RING, PTFE encapsulated | 1 |
| 5 | 111225 | CONNECTOR, tube; 90 deg. | 2 | 19★ | D31211 | PUMP, diaphragm | 1 |
| 6 | 111337 | TEE, fitting, street | 1 | 20 | 15R421 | FITTING, recirculation w/ nozzle | 1 |
| 7 | 113319 | FITTING, air | 2 | 22 | 513066 | TUBE, nylon, 3/8 in. OD; 40 ft. | 1 |
| 8 | 113497 | VALVE, relief | 1 | 23 | 237569 | WIRE, assy.; 25 ft. (not shown) | 1 |
| 9 | 113630 | ELBOW, street, 45 deg; 1/8 npt | 1 | 24 | C38321 | TIE, cable (not shown) | 10 |
| 10 | 115841 | ELBOW | 1 | 25 | 156580 | ADAPTER; 3/8 in. x 1/8 in. | 1 |
| 11 | 155541 | UNION, swivel. 90 deg. | 1 | 26 | C19394 | ELBOW, 90 deg., SST; 3/8 in. OD tube x 3/8 nptm | 1 |
| 12 | 156971 | NIPPLE, short | 1 | 27 | 162453 | NIPPLE; 1/4 npsm x 1/4 npt | 1 |
| 13 | 157350 | ADAPTER | 1 | | | | |
| 14 | 15F058 | MANIFOLD, filter, remote | 1 | | | | |

★ Refer to manual 308353 for diaphragm pump operation and service.

Technical Data

Wetted parts 303 and 304 grades of SST, Acetal, Anodized Aluminum,
Brass, Buna-n, Nickel and Zinc plated Carbon Steel,
Nylon, PTFE, Urethane, Zytel

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